

QA6 – Asthma & Obesity in Infants & Children

QUESTION:

In the last three years I have observed several children in WIC and HeadStart who have asthma and are obese. However, these children are not on steroids - many use a nebulizer with albuterol - especially in the winter. Most of these children are on or just over the 95% for wt/length or wt/height. So far I have not observed any of these children having delayed length or height for their age - in fact most of them are over the 50% percentile. Is there any research showing a correlation to obesity and asthma when steroids are not used?

ANSWER:

There does appear to be an association between asthma and risk of overweight in both children and adults.¹⁻⁴ This association has only recently been identified, and the nature of the relationship between asthma and body composition is not understood. For the most part, the few studies that have found that adults and children with asthma were more likely to be overweight have not included subjects who were receiving systemic corticosteroids, and the relationship does not seem to be related to steroid use.

One study that is available only as an abstract³ found that women who gained weight as they grew older had increased risk of developing asthma. This may indicate that there is something about weight gain itself that increases risk of asthma. It has been speculated that some obese individuals may not be able to take frequent deep breaths and that this is somehow related to developing asthma.⁴

Authors of published studies of children have speculated that many children with asthma are inappropriately inactive due to parental fears of activity precipitating asthma exacerbation.^{1,2} There may also be environmental or genetic links between asthma and obesity that we will learn more about as this interesting association as research continues.

In clinical practice it is a good idea to make sure that families of children with asthma are aware of the components of good asthma care. Many children with asthma require daily “controller” medications to treat the underlying inflammation of asthma. This means that families will need to give medications even when the child does not appear to be sick. This approach is especially important for the child who is at risk of being overweight because a good medication pattern increases enjoyment and tolerance of physical activity. Appropriate daily asthma treatment also reduces the risk of asthma exacerbations and of long term damage to the airways.⁵

As both asthma and obesity appear to have familial and genetic components, families with children who have asthma can benefit from information about establishing an environment that promotes healthy eating, fewer sedentary activities, and increased physical activity for everyone in the family. The guidelines published by the American Academy of Pediatrics offer a useful framework.⁶

These include the concepts of early intervention, readiness to change, methodic and gradual long term change, monitoring of food and activity behaviors, and a team approach that is designed to meet the needs of the individual family.

References:

- 1) Luder et al. Association of Being Overweight with Greater Asthma Symptoms in Inner City Black and Hispanic Children. *Journal of Pediatrics* 1998; 132: 699-703.
- 2) Gennuso et al. The Relationship between Asthma and Obesity in Urban minority Children and Adolescents. *Archives of Pediatrics and Adolescent Medicine*. 1998; 152(12); 1197-1202.
- 3) Camargo et al. Abstract: Prospective Study of Body Mass Index and Risk of Adult-Onset Asthma. ALA/ATS 1998 International Conference, April 24-29, Chicago, Illinois.
- 4) Camargo. April 27, 1999. Chubby Kids May Be at Greater Risk for Asthma. www.intelihealth.com/enews?220563.
- 5) National Asthma Education and Prevention Program. Expert Panel Report II: Guidelines for the Diagnosis and Management of Asthma. February 1997. Available on line at <http://www.nhlbi.nih.gov/nhlbi/lung/asthma/prof/asthgdln.htm>
- 6) Barlow SE and Dietz WH. Obesity Evaluation and Treatment: Expert Committee Recommendations. *Pediatrics* 1998; 102:e29.